

Transmitted Via Facsimile to (571) 273-8300

Docket No. 135255 (SPLG 1036)

REMARKS

Claims 1-21 are pending in this application. Claims 1-21 stand rejected. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1-21 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Chenal et al. (U.S. Patent Application Publication 2002/0072671). Applicants respectfully traverse this rejection for at least the reasons set forth hereafter.

Independent claim 1, as amended, recites a method for detecting an anatomic structure based on a medical diagnostic imaging data set comprising, among other elements "analyzing a search region of said data set surrounding said contour template to identify transition points associated with a predefined characteristic of the anatomic structure and based at least on a transition smoothness." Independent claim 13, as amended, recites a system for identifying an endocardium comprising, among other elements "a signal processor processing said series of image frames to identify at least one of an apex and an AV plane having first and second ends, said signal processor overlaying a contour template connecting said apex to said first and second ends on said series of image frames, said signal processor identifying and comparing points along said contour template to identify transition points based upon a predefined characteristic of an endocardium and a transition smoothness." Independent claim 17, as amended, recites a method for identifying at least one of a contour between different types of tissue and a contour between tissue and blood comprising, among other elements "comparing said data points to identify transition points having a predefined characteristic indicative of a change from one type of tissue to one of a second type of tissue and blood, and a transition smoothness." Chenal fails to describe or suggest the claimed invention recited in claims 1, 13 and 17.

Chenal describes an automated border detection method for ultrasound diagnostic imaging wherein three key landmarks in an image are initially identified, for example, based on the brightness of pixels in the image (page 2, paragraph 0027). Thereafter, one of a number of predetermined standard shapes is fitted to the three landmarks and an analysis performed of the

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degree to which the shape fits the border of the echo data, such as, by using distance measurements (page 3, paragraph 0031). The chosen shape is then stretched by analyzing lines of pixels evenly spaced around the border and approximately normal to an object wall being imaged, for example, a heart wall. After the shape has been fitted to the points using the stretching, the border tracing is then smoothed and displayed (page 3, paragraph 0032). A user may manually adjust the border trace by moving or stretching the trace with the remaining portion of the trace automatically adjusted (page 4, paragraph 0035).

Each of claims 1, 13 and 17, as amended, variously recite identifying transition points based upon a transition smoothness. Chenal fails to describe or suggest determining any transition smoothness to identify transition points used to adjust, for example, a contour template. The method of Chenal smoothes the contour after the border has been adjusted by stretching. The determination of whether to stretch the shape in Chenal is based on pixel intensity (see, e.g., Chenal, page 3, paragraphs 0030 and 0032). Only after the shape is fit by stretching is smoothing performed. There is simply no use of a determination of transition smoothness, for example, between different analyzed points along and adjacent to the shape to identify transition points. Accordingly, Applicants submit that independent claims 1, 13 and 17 are allowable over Chenal.

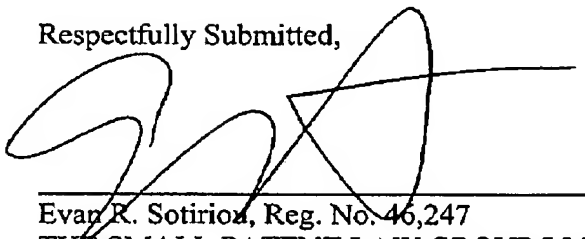
Claims 2-12 depend from independent claim 1, claims 14-16 depend from independent claim 13 and claims 18-21 depend from independent claim 17. Accordingly, when the recitations of these claims are considered in combination with the recitations of the independent claim from which these claims depend, Applicants submit that claims 2-12, 14-16 and 18-21 are likewise patentable over Chenal for at least the reasons set forth above.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art neither anticipates nor renders obvious the claimed invention and the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

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Docket No. 135255 (SPLG 1036)

Respectfully Submitted,

A handwritten signature in black ink, appearing to be 'ES', written over a horizontal line.

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